Public Law 99-502, the Federal Technology Transfer Act of 1986, as amended.

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT (hereinafter "CRADA") No.

BETWEEN

U. S. DEPARTMENT OF ENERGY NAVAL PETROLEUM AND OIL SHALE RESERVES-CUW (NPR-3) ROCKY MOUNTAIN OIL FIELD TESTING CENTER (RMOTC)

AND

(hereinafter "Participant") both being hereinafter jointly referred to as the "Parties."

ARTICLE I: DEFINITIONS

- A. "Government" means the United States of America and agencies thereof.
- B. "DOE" means the Department of Energy, an agency of the United States of America.
- C. "RMOTC" means the Rocky Mountain Oil Field Testing Center, a business unit of the Department of Energy, Naval Petroleum and Oil Shale Reserves-CUW, NPR-3, a government-owned and operated facility engaged in the conduct of energy research and development.
- D. "Deputy Assistant Secretary for Petroleum Reserves" means the Deputy Assistant Secretary for Petroleum Reserves with the authority to enter into CRADAs and to implement patent, data, and licensing matters pursuant to the Federal Technology Transfer Act of 1986, as amended.
- E. "Generated Information" means information produced in the performance of this CRADA.
- F. "Proprietary Information" means information which is developed at private expense outside of this CRADA, embodies (i) trade secrets or (ii) commercial or financial information which is privileged or confidential under the Freedom of Information Act (5 U.S.C. § 552(b)(4)), and is marked as Proprietary Information.
- G. "Protected CRADA Information" means Generated Information which is marked as being Protected CRADA Information by a Party to this CRADA, and which would have been Proprietary Information had it been obtained from a non-federal entity.
- H. "Unlimited rights" means the right to use, disclose, reproduce, prepare derivative works distributed to the public, and perform publicly or display publicly in any manner or for any purpose, or to permit

others to do so.

- I. "Subject Invention" means any invention of the Parties conceived or first actually reduced to practice in the performance of work under this CRADA.
- J. "Intellectual Property" means patent applications, patents, and other forms of comparable property rights protected by Federal law and its foreign conterparts.

ARTICLE II: JOINT WORK STATEMENT

Appendix A, Joint Work Statement, is hereby incorporated into this CRADA by reference.

ARTICLE III: TERM AND CONTRIBUTIONS OF THE PARTIES

- A. The terms of the CRADA, unless otherwise specified, shall remain in effect from the date signed by the Deputy Assistant Secretary for Petroleum Reserves through
- B. The total estimated project cost is \$. The Participant's estimated contribution is \$ which consists of \$ in-kind contributions; and \$ cash contributions for reimbursement of labor, materials and supplies. The Government's estimated in-kind contribution is \$, subject to available funding.
- C. The Parties shall have no obligation to continue or complete performance of the work at an amount in excess of the estimated contribution in paragraph B above, including any subsequent amendment.
- D. Each Party agrees to provide thirty (30) days advance notice to the other Party if the actual amount to complete performance will exceed the estimated contribution.
- E. Sufficient advance funds shall be obtained to maintain approximately a 90-day advance of funds during the entire period of work covered by the funds provided by the participant under the CRADA. No work will begin before the receipt of a cash advance. Failure of Participant to provide the necessary advance funding is cause for termination of the CRADA in accordance with the Termination article of the CRADA.

ARTICLE IV: PERSONAL PROPERTY

Any tangible personal property produced in conducting the work under this CRADA shall be owned by the Party paying for it. There will be no jointly funded property. Personal property shall be disposed of as directed by the owner at the owner's expense.

Failure of the Participant to remove its property from federal property will establish a presumption of abandonment under federal property regulations.

ARTICLE V: DISCLAIMER

THE GOVERNMENT AND THE PARTICIPANT MAKE NO EXPRESS OR IMPLIED WARRANTY AS TO THE CONDITIONS OF THE RESEARCH OR ANY INTELLECTUAL PROPERTY OR PRODUCT MADE, OR DEVELOPED UNDER THIS CRADA, OR THE OWNERSHIP, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE RESEARCH OR RESULTING PRODUCT. NEITHER THE GOVERNMENT NOR THE PARTICIPANT SHALL BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES.

ARTICLE VI: HOLD HARMLESS

Except for any liability resulting from any negligent acts or omissions of the Government, the Participant agrees to hold the Government harmless for all damages, costs and expenses, including attorney's fees, arising from personal injury or property damage occurring as a result of the making, using or selling of a product, process or service by or on behalf of the Participant, its assignees or licensees, which was derived from the work performed under this CRADA.

ARTICLE VII: PROPRIETARY INFORMATION

Each party agrees to not disclose Proprietary Information provided by the other Party to anyone other than the providing Party without the written permission of the providing Party, except to Government employees who are subject to 18 U.S.C. § 1905.

ARTICLE VIII: OBLIGATIONS AS TO PROTECTED CRADA INFORMATION

Each Party may designate and mark as Protected CRADA Information any qualifying Generated Information produced by its employees. For a period of **[NOT TO EXCEED FIVE YEARS]** from the date it is produced, the Parties agree not to further disclose such Information except as necessary to perform this CRADA or to other DOE facilities with the same protection in place.

The Party will mark the cover of any document containing Protected CRADA Information with the following legend:

"PROTECTED CRADA INFORMATION

THIS DOCUM	ENT CONTAINS PROT	TECTED CRADA INFORMATION
WHICH WAS	PRODUCED ON	[DATE] UNDER CRADA
NO	_AND IS NOT TO BE	FURTHER DISCLOSED FOR A
PERIOD OF _	[NOT TO I	EXCEED 5 YEARS] FROM THE
DATE IT WAS PRODUCED EXCEPT AS EXPRESSLY PROVIDED		
FOR IN THE C	'RADA "	

In addition, the Party will mark each page of the document with the following legend: "PROTECTED CRADA INFORMATION."

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ARTICLE IX: CESSATION OF OBLIGATIONS REGARDING PROTECTED AND PROPRIETARY INFORMATION

The obligations relating to the disclosure of Protected CRADA Information and Proprietary Information shall end if any such information becomes inadvertently publicly known or is developed independently by another who did not have access to the information under this CRADA.

ARTICLE X: RIGHTS IN GENERATED INFORMATION

The Government shall have unlimited rights in all Generated Information produced or provided by the Participant under this CRADA, except for information which is disclosed in a Subject Invention disclosure being considered for patent protection, or marked as being copyrighted, Protected CRADA Information or Proprietary Information.

ARTICLE XI: EXPORT CONTROL

EACH PARTY IS RESPONSIBLE FOR ITS OWN COMPLIANCE WITH SUCH LAWS AND REGULATIONS.

ARTICLE XII: REPORTS AND ABSTRACTS

At the time the CRADA is submitted to the Deputy Assistant Secretary for Petroleum Reserves for approval, the Participant will provide an abstract suitable for public release. The Parties will jointly prepare a final report, to include a list of subject inventions.

Use of the name of the other Party or its employees in any promotional activity, with reference to this CRADA, requires written approval of the other Party.

ARTICLE XIII: RIGHTS TO SUBJECT INVENTIONS

- A. Each Party agrees to disclose to the other Party every Subject Invention that may be patentable or otherwise protectable under the Patent Act. The Parties will disclose Subject Inventions to each other within two (2) months after the inventor first discloses the Subject Invention in writing to the person(s) responsible for patent matters of the disclosing Party.
- B. Each party shall have the first option to retain title to any Subject Invention solely made by its employees during the work under this CRADA. For joint Subject Inventions made by the DOE and the Participant, the Participant shall have the option of electing to retain title to its undivided rights and, if this option is elected, title to such Subject Inventions shall be jointly owned by the DOE and the Participant.
- C. The Participant acknowledges that the DOE may obtain title to each Subject Invention for which a patent application is not filed, a patent application is not prosecuted to issuance, or for which any issued patent is not maintained by the Participant.
- D. If the Participant elects to retain title to a Subject Invention, or chooses an exclusive license to a RMOTC employee Subject Invention as provided below, the Government shall retain a nonexclusive, non-transferable, irrevocable, paid-up license to practice, or to have practiced, the invention by or on

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behalf of the United States throughout the world.

E. The Participant shall have the option to choose an exclusive license for [SPECIFY THE PRE-NEGOTIATED FIELD OF USE] for any patents or patent applications made in whole or in part by employees of DOE/RMOTC under this CRADA. This option shall only be available to the Participant for a period of twelve months after the DOE reports the invention to the Participant or such longer time as may be approved by DOE. The Parties agree to negotiate in good faith to enter a separate mutually agreeable license agreement, including reasonable compensation, commercialization milestones, a U.S. competitiveness clause, March-in Provisions and other reasonable terms and conditions. If such license agreement is not completed within one year of initiation of good faith negotiations, the Government reserves the right to grant licenses in any and all possible applications.

ARTICLE XIV: REPORTS OF INVENTION USE

The Participant agrees to submit, upon request of DOE, a non-proprietary written report no more frequently than annually on its efforts to obtain commercial utilization of any Subject Invention to which the Participant holds title.

ARTICLE XV: DOE MARCH-IN RIGHTS

The Participant acknowledges that the DOE has certain march-in rights to any waived Subject Inventions in accordance with 48 CFR 27.304-1(g).

ARTICLE XVI: <u>U. S. COMPETITIVENESS</u>

The Parties agree that a purpose of this CRADA is to provide substantial benefit to the U. S. economy. In exchange for the benefits received under this CRADA, the Parties therefore agree to the following:

- A. products embodying Intellectual Property developed under this CRADA shall be substantially manufactured in the United States,
- B. processes, services, and improvements thereof which are covered by Intellectual Property developed under this CRADA shall be incorporated into the Participant's manufacturing facilities in the United States either prior to or simultaneously with implementation outside the United States. Such processes, services, and improvements, when implemented outside the U.S., shall not result in reduction of the use of the same processes, services, or improvements in the United States.

ARTICLE XVII: FORCE MAJEURE

Neither Party will be liable for unforeseeable events beyond its reasonable control.

ARTICLE XVIII: TERMINATION

This CRADA may be terminated by either Party upon thirty (30) days written notice to the other party. Each Party will be responsible for its share of the costs incurred through the effective date of termination as well as its share of the costs incurred after the effective date of termination and which are related to the termination. Any non-use or confidentiality obligations of the CRADA shall survive any termination of this

CRADA except under the conditions provided for in Article IX.

ARTICLE XIX: NOTICES

- A. Any communications required by this CRADA shall be deemed made if mailed by postage prepaid first class U. S. Mail addressed to the Party to receive the communication as of the day of receipt of such communication by the addressee on the date given if by verified facsimile. Address changes shall be given in accordance with this Article and shall be effective thereafter. All such communications, to be considered effective, shall include the number of this CRADA.
- В. The points of contact for the Parties are as follows:

RMOTC Technical Contact:

Ken Roberts

Department of Energy, 907 N. Poplar, Ste 150

Department of Energy, 907 N. Poplar, Ste 150

Casper, WY 82601

Casper, WY 82601

Phone: 307-261-5000, Ext.

Phone: 307-261-5000, Ext. 5066

Fax: 307-261-5817

Fax: 307-261-5817

E-mail: Ken.Roberts@rmotc.doe.gov

RMOTC Administrative Contact:

*An employee of Critique, Inc. a support service contractor to the Department of Energy.

Participant Technical Contact:

Participant Administrative Contact:

Phone: Fax: E-mail:

E-mail:

ARTICLE XX: DISPUTES

The Parties will attempt to resolve any differences between them that may arise during the course of this CRADA. In the event that a dispute cannot be resolved between the Parties, the matter will be referred to the DOE's Board of Contract Appeals. The Board has established an Alternate Disputes Resolution (ADR) procedure which will be the first approach used in an attempt to resolve the dispute. Upon failure of the ADR process, the matter will be adjudicated by the Board using its regular contracts disputes procedure. In any event, this disputes process will not prevent either Party from terminating this CRADA in whole or in part under Article XVIII of this CRADA.

The construction, validity, performance, and effect of this agreement for all purposes shall be governed by the laws applicable to the Government of the United States.

ARTICLE XXI: ENTIRE CRADA AND MODIFICATIONS

- A. This document [and its Appendices] represents the entire agreement reached between the Parties in performing the research described in Article II, Joint Work Statement, and becomes effective on the date the Deputy Assistant Secretary for Petroleum Reserves signs the document.
- В. Any agreement to materially change any terms or conditions shall be valid only if the change is made in writing, and executed by the Parties.

FOR PARTICIPANT:		
By:		
Date:		
FOR U	J. S. DEPARTMENT OF ENERGY:	
Ву:	R. D. Furiga Deputy Assistant Secretary for Petroleum Reserves	
Date:		